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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,559	11/21/2001	Shigeyuki Kurahashi	15107	2538

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EXAMINER

ADAMS, JONATHAN R

ART UNIT PAPER NUMBER

2134

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,559

Applicant(s)

KURAHASHI, SHIGEYUKI

Examiner

Jonathan R Adams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan et al., US Patent No 6374036 (hereafter referred to as '036) in view of "Multimedia in the Teaching Space" (hereafter referred to as MTS) in further view of Rhoads et al., US Patent No 6636615 (hereafter referred to as '615)

As to claim(s) 1:

'036 teaches a video watermarking system comprising:

- Detecting a watermark from an input image / The watermark is read by the detector circuitry in the recorder or player which instructs the recorder or player to perform certain functions, such as do not copy, or allow only a single copy of the material, depending on the watermark. Use of watermarks requires special detector circuitry in a compliant recorder or player. (Col 2, Lines 46-51, '036)
- Detecting attributes of an input watermarked image / The compliant digital video recorder prior to recording examines the watermark, verifies it, detects the copy-once bit in the watermark, and extracts the associated attribute value from the

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watermark. (Col 3, Lines 26-29, '036), Multiple attributes (Col 12, Lines 42-46, '036)

- Watermark includes copy control information used for copy generation limitations / These four bits therefore have the conventional use which is to indicate copy-once/copy-never/copy no more (Col 4, Line 35, '036)
- second detector fails to detect the watermark including second scaling factor, second watermark including the first scaling factor is used / Transformation from copy-once watermark to copy no more watermark is performed by degradation (Col 11, Lines 38-40, '036)

3. '036 does not teach for the attributes to be scaling factors. MTS teaches distinctive scaling factor video attributes for video signals based on primary color representation (Page 66, YUV, scale factors U, V, and C, MTS). It would have been obvious to a person of ordinary skill in the art at the time of invention to use the distinctive video scaling factors taught in MTS for the watermark embedded attributes of '036. One of ordinary skill in the art would have been motivated to use the distinctive video scaling factors taught in MTS for the watermark embedded attributes of '036 because distinctive color representation is an essential irremovable component to major video signals.

4. '036 as modified above does not teach for the scaling factor attributes to be embedded in separate watermarks. '615 teaches assigning separate watermarks to color representation values based on primary colors (Col 5, Lines 28-46, '615). It would have been obvious to a person of ordinary skill in the art at the time of invention

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to assign the scaling factor attributes to the separate watermarks of '036 as done in '615. One of ordinary skill in the art would have been motivated to assign the scaling factor attributes to the separate watermarks of '036 as done in '615 because using scaling factors such as the composite scaling factor C of 'MTS for the copy no more watermark increases security by relying on a combination of colors for the watermark.

5. As to claim(s) 2:

Detecting the appended-type watermark from the input watermark based on third scaling factor calculated from first and second scaling factors / Detecting the never copy watermark refuses to make any recording of the material (Col 4, Lines 43-48, '036)

First and second scaling factors are used to calculate third scaling factor /

$$U = 0.493 * (B - Y)$$

$$V = 0.877 * (R - Y)$$

U and V components are typically modulated into a chroma component:

$$C = U * \cos(t) + V * \sin(t)$$

(Page 66, YUV, MTS)

6. As to claim(s) 3:

first detector searches for the first watermark while scaling the input image in steps of a predetermined amount / It is inherent to the invention of '036 as modified above that the detector traverse/scale the image bits to detect watermarked bits

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As to claim(s) 4:

7. '036 as modified above teaches a watermarking system using separate watermarks to represent scaling factors for color representations and a composite scaling factor. '036 does not specifically teach that the third scaling factor is calculated by dividing the first scaling factor by the second scaling factor. The examiner takes official notice as to calculating the third scaling factor by dividing the first scaling factor by the second scaling factor. It would have been obvious to a person of ordinary skill in the art at the time of invention to calculate the third scaling factor by dividing the first scaling factor by the second scaling factor. One of ordinary skill in the art would have been motivated to calculate the third scaling factor by dividing the first scaling factor by the second scaling factor because the composite function for determining the composite scaling factor can be implemented by any of a large number of functions to represent several color representations including division.

8. As to claim(s) 5-10:

Claims 5-10 correspond to claims 1-4

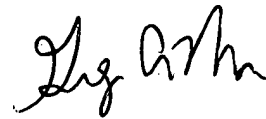
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan R Adams whose telephone number is

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(571)272-3832. The examiner can normally be reached on Monday – Friday from 10am to 6pm.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached on (703) 308-4789. The fax phone number for the organization where this application or proceeding is assigned is (571)272-3838. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

A handwritten signature in black ink, appearing to read "Greg Morse", is positioned above the official stamp.

GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100